

REMARKS

Claim 36 has been added.

Claim 9 has been canceled.

Claims 1-8 and 10-36 are pending for further examination.

In the Office action, the claims were rejected as follows:

(1) Claims 1-4, 6-14 and 24-27 are rejected under 35 U.S.C. § 102 as anticipated by U.S. Patent No.5,464,087 (Bounds et al.).

(2) Claims 5, 15-23 and 28-35 are rejected 35 U.S.C. § 103 as unpatentable over the combination of the Bounds et al. patent and U.S. patent No. 6,119,053 (Taylor et al.).

Applicant respectfully requests reconsideration.

According to claim 1, for example, a device for handling money includes a money handling apparatus (e.g., changer 110 in FIG. 1) with an internal controller (e.g., microcontroller 400) for controlling the money handling apparatus. The device has a first port (e.g., port P1) for removable connection to an external controller (e.g., vending machine controller 130) for communication with the internal controller. The internal controller is arranged to communicate over a second port (e.g., port P2) with a further device (e.g., device 70, 100 or 105) using a communications protocol. The protocol supports communication between the internal controller and any one of at least first and second different types of device for handling money. The first type of device handles money of a different type from those handled by the second type. In the example of FIGs. 1 and 2, the protocol allows the microcontroller 400 to communicate with coin change dispenser 105, bill validator 100 or card reader 70, which handle different types of money from one another.

An aspect of the invention relates to the provision of the additional port (e.g., port P2 in FIG. 1) on a money handling device (e.g., changer 110) to allow piggy-back connection of devices which do not comply with the protocol of the main port (e.g., port P1) that connects the money handling device to an external controller. The two protocols may be entirely different or

they may be different versions of the same protocol (*see, e.g.*, U.S. Patent No. 6,390,269, col. 5, lines 51-55).

Claim 1 has been amended to clarify that the communications protocol, which is used by the internal controller to communicate over the second port (*e.g.*, port P2) with the further device, is not fully supported over the first port (*e.g.*, port P1). Claim 1 also has been amended to clarify that the device for handling money is arranged such that communications between the external controller and the further device for handling money are relayed by the internal controller.

In contrast, the Bounds et al. patent discloses a transaction system including multiple components interconnected by a bus, with each of the components operable to initiate communication directly with another of the components. Therefore, the Bounds et al. patent does not disclose that the device for handling money is arranged such that communications between the external controller and the further device for handling money “are relayed by the internal controller,” as recited by claim 1.

Furthermore, the Bounds patent explains that the same message format is used for data communication between all the components. *See, e.g.*, col. 6, line 66 – col. 7, line 21. In each component, the communication software is operable to receive messages in the common format. Col. 10, lines 5-6. Furthermore, each component follows the same technique for transmitting and receiving data (*see* FIGS. 4A and 4B, and the associated description). Therefore, the Bounds et al. patent does not disclose an internal controller arranged to communicate over a second port with a further device using a communications protocol that is “not fully supported over the first port,” as recited in claim 1.

At least for these reasons, the rejection of claim 1 should be withdrawn.

Other independent claims (*e.g.*, claims 7, 8, 14, 15, 19, 20, 21) recite one or both of the features discussed above and, therefore, are distinguishable from the Bounds et al. patent at least for the reasons discussed above. The rejections of those claims should be reversed for additional reasons as well.

For example, claim 15 recites that the internal controller is arranged to convert between first units of value used for communications over the first port and second units of value used for communication over the second port. The Office action acknowledges (at bottom of page 4) that the Bounds et al. patent does not disclose that feature, but argues that the Taylor et al. patent discloses that feature and that it would have been obvious to incorporate it into the system of the Bounds et al. patent.

Applicant respectfully disagrees. Although the Taylor et al. patent mentions the possibility of providing a special adapter to convert between different protocols, that patent actually criticizes such approaches as “significantly raising the cost” (col. 1, lines 43-51). The alternative approaches disclosed by the Taylor et al. in FIGS. 1 and 2 do not use such conversions between protocols. Instead, the systems include two busses each of which supports a different protocol. A bus is selected depending on the protocol to be used for communicating with a particular peripheral device. As further explained by the Taylor et al. patent, the embodiment of FIG. 1 is “more cost effective” than providing a custom designed converter for converting between protocols, and the embodiment of FIG. 2 is even more cost effective than the embodiment of FIG. 1 (col. 4, lines 28-34). A person of ordinary skill would have no reason to use the special adapter mentioned by the Taylor et al. patent.

Furthermore, the Taylor et al. patent does not mention converting between different “units of value” as recited in claim 15. Therefore, even if the disclosure of the Taylor et al. patent were somehow combined with the disclosure of the Bounds et al. patent, that would not render obvious the subject matter of claim 15.

Similar arguments apply to claim 19, which recites “converting between first units of value used for communication over said first port and second units of value used for communication over said second port.”

Likewise, there is no disclosure of the additional feature of claim 20, which recites that the internal controller is arranged “to receive a code indicative of the type of the further device on the second port, and to output in response thereto on the first port an amended code

representative to said external controller of a type different from that of the further device.” The Office action points to figure 2 and col. 3, lines 33-64 of the Taylor et al. patent as allegedly disclosing that feature, but that is clearly incorrect. The Office action is unclear as to what allegedly corresponds to the first and second ports, and what represents the code and the amended code. Similar arguments apply to claim 21.

Regarding claims 22 and 23, the Office action completely fails to address certain features recited in those claims. For example, claim 22 recites that the internal controller is arranged to *detect to which of a plurality of ports the external controller is connected* and to communicate with the external controller using a communications protocol selected according to the detected one of the ports. None of the cited references discloses such a feature and the cited references do not render obvious the claimed subject matter. Claim 23, which recites “detecting to which of said ports the external controller is connected” is distinguished from the cited references based on similar reasons.

The dependent claims should be patentable at least for the reasons discussed above with respect to the claims from which they depend.

Conclusion

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

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Respectfully submitted,

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